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EXAMINER	
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ART UNIT	PAPER NUMBER
2834	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,923	VASILESCU, CLAUDIU	
	Examiner	Art Unit	
	NAISHADH N. DESAI	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanaya et al (US 5650675.

1. Regarding claim 1, Kanaya et al teaches:

A rotating electrical machine comprising a longitudinal axis (abstract and Fig 1),

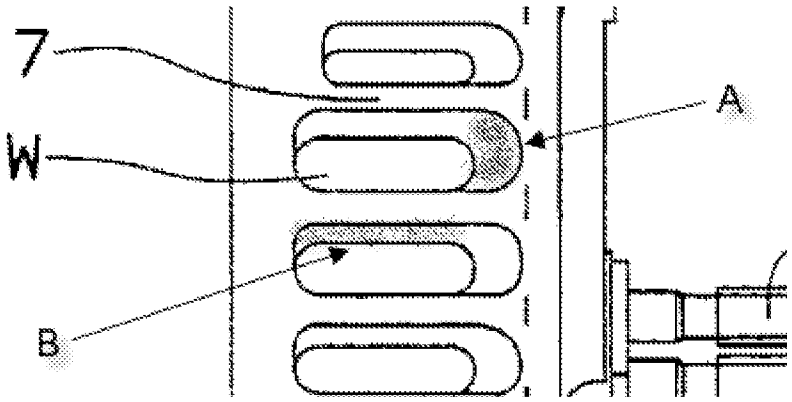
an outer shell of hollow form (Fig 1), a stator fixed in the outer shell (Fig 1 and Col 3 ll 39-48), a rotary shaft passing through the stator along the longitudinal axis (Fig 1 and Col 3 ll 39-40), a rotor fixed to the rotary shaft rotating inside the stator (Fig 1 and Col 3 ll 42-43), and

a fan with blades driven rotationally by the rotary shaft and disposed on a first axial side of the rotor inside said outer shell (Fig 1,5 and 6 and Col 3 ll 39-43), said

outer shell having on the one hand at its outer periphery radial ports and on the other hand at least one of its axial ends, axial ports for constituting air inlet and air outlet ports arranged so that the fan creates a flux of air going from said air inlet to said air outlet (Fig 1),

said air inlet and outlet ports each comprising an opening cut in the outer shell and subdivided by mechanical supporting fins each elongated according to a profile specific thereto (Figs 1 and 2), in which a radial port is made on a radial face overall of longitudinal orientation of the outer shell and has a substantially cylindrical overall shape coaxial with the longitudinal axis (see re-illustration of Fig 7, labels A and B below),

wherein at least one fin referred to as a radial fin of said radial port, considered in a plane tangential to said radial port at the level of said radial fin, extends in a general direction forming an angle greater than 0° with respect to a longitudinal direction (Figs 2-5 and re-illustration of Fig 7, labels A and B) so that edges of the fan with blades turned towards said radial port progressively sweep across the radial fin according to its profile while turning about the rotary shaft (Figs 2-5 and re-illustration of Fig 7, labels A and B), in a shearing movement whereby at each instant only one substantially point-shaped portion of an edge of the blade is opposite the radial fin (it is inherent that only one edge of the blade would be opposite the fin at each instance, unless there is more than one blade located above or below each other in the radial direction).



Kanaya et al teaches a rotary machine having variably-dimensioned housing ventilation holes. Kanaya et al does not appear to literally mention that the fins and or holes are inclined in the longitudinal direction. However, Fig 7 shows that the walls have both radial and longitudinal inclined angles greater than zero degrees and read on applicant's claim language (see re-illustration of Fig 7, labels A and B above). It would have been obvious to one having ordinary skills in the art at the time the invention was made to change the shape of the inclined walls to also be longitudinally inclined. The motivation to do so would be that Kanaya et al teaches the fins to have a curved profile and a section with variable size (Figs 2,4,5,7 and 8) and that it would increase the flow of cooling air and reduce whizzing sounds and noise (abstract).

2. Regarding claim 2, Kanaya et al teaches:

The rotating electrical machine according to Claim 1, wherein the angle is less than 30° (Figs 4 and 5).

3. Regarding claim 3 Kanaya et al teaches:

The rotating electrical machine according to Claim 1, wherein the radial port comprises at least one radial fin which, considered in cross-section in a plane perpendicular to the longitudinal axis, is inclined with respect to a radial direction (Fig 2).

4. Regarding claim 4 Kanaya et al teaches:

The rotating electrical machine according to Claim 1, wherein at least one axial port is made on an axial face of the outer shell, overall of orientation perpendicular to the longitudinal axis, and is delimited on a radially inner side by a substantially circular inner edge, at least one fin, referred to as an axial fin, of said radial port, considered in a plane perpendicular to the longitudinal axis, extending in a general direction forming an angle less than 90° with respect to the tangent to the inner edge so that said axial fin, considered in cross-section in a plane perpendicular to the longitudinal axis, is inclined with respect to the radial direction (Figs 2 and 4 and 5).

5. Regarding claim 5 Kanaya et al teaches:

The rotating electrical machine according to Claim 4, wherein the angle is greater than 60° (Figs 4 and 5).

6. Regarding claim 6 Kanaya et al teaches:

The rotating electrical machine according to Claim 4, wherein the radial port comprises at least one radial fin which, considered in cross-section in a plane perpendicular to the

longitudinal axis, is inclined with respect to the radial direction, and in that the axial fin, considered in cross-section in a plane perpendicular to the longitudinal axis, is inclined with respect to the radial direction in the same sense as the radial fin (Figs 2 and 4 and 5).

7. Regarding claim 7 Kanaya et al teaches:

The rotating electrical machine according to Claim 1, wherein the radial fins have, perpendicular to their profile, a section of constant size.

8. Regarding claim 8 Kanaya et al teaches:

The rotating electrical machine according to Claim 1, wherein the radial fins have, perpendicular to their profile, a section of variable size along this profile.

9. Regarding claim 9 Kanaya et al teaches:

The rotating electrical machine according to Claim 8, wherein the fins have a curved profile.

Regarding claims 7-9 above, Kanaya et al discloses the claimed invention except for the shape or size of the radial fins to be of a of a particular shape. It would have been an obvious matter of design choice to make radial fins of different shapes and sizes, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose, 105 USPQ 237 (CCPA 1955).* Kanaya et al also teaches the fins to have a curved profile and a section with variable size (Figs 2,4,5,7 and 8). The motivation to change the shape of the fins would be based on the parameters of space

availability, location of the fins with respect to the stator, housing as well as size/ and shape of the stator to determine the location and shape and size of the fins. The motivation would also be that it would increase the flow of cooling air and reduce whizzing sounds and noise (abstract).

10. Regarding claim 10 Kanaya et al teaches:

The rotating electrical machine according to Claim 1, wherein at least one of the fins of at least one of the axial and radial ports has an edge turned towards the fan inclined so that the edges of the blades of the fan turned towards said port progressively sweep across said edge of the fin while turning about the rotary shaft (Figs 2 and 4 and 5).

11. Regarding claim 11, Kanaya et al teaches:

An alternator for use in a vehicle, said alternator comprising a longitudinal axis (Fig 1),

an outer shell of hollow form (Fig 1), a stator fixed in the outer shell (Fig 1 and Col 3 ll 39-48), a rotary shaft passing through the stator along the longitudinal axis (Fig 1 and Col 3 ll 39-40), a rotor fixed to the rotary shaft rotating inside the stator (Fig 1 and Col 3 ll 42-43), and

a fan with blades driven rotationally by the rotary shaft and disposed on a first axial side of the rotor inside said outer shell (Fig 1,5 and 6 and Col 3 ll 39-43), said outer shell having on the one hand at its outer periphery radial ports and on the other hand at least one of its axial ends, axial ports for constituting air inlet and air outlet ports

arranged so that the fan creates a flux of air going from said air inlet to said air outlet (Fig 1),

said air inlet and outlet ports each comprising an opening cut in the outer shell and subdivided by mechanical supporting fins each elongated according to a profile specific thereto (Figs 1 and 2), in which a radial port is made on a radial face overall of longitudinal orientation of the outer shell and has a substantially cylindrical overall shape coaxial with the longitudinal axis (see re-illustration of Fig 7, labels A and B above),

wherein at least one fin referred to as a radial fin of said radial port, considered in a plane tangential to said radial port at the level of said radial fin, extends in a general direction forming an angle greater than 0° with respect to a longitudinal direction (Figs 2-5 and re-illustration of Fig 7, label A above) so that edges of the fan with blades turned towards said radial port progressively sweep across the radial fin according to its profile while turning about the rotary shaft (Figs 2-5), in a shearing movement whereby at each instant only one substantially point-shaped portion of an edge of the blade is opposite the radial fin (it is inherent that only one edge of the blade would be opposite the fin at each instance, unless there is more than one blade located above or below each other in the radial direction).

Kanaya et al teaches a rotary machine having variably-dimensioned housing ventilation holes. Kanaya et al does not appear to literally mention that the fins and or holes are inclined in the longitudinal direction. However, Fig 7 shows that the walls have both radial and longitudinal inclined angles greater than zero degrees and read on applicant's

claim language (see re-illustration of Fig 7, labels A and B above). It would have been obvious to one having ordinary skills in the art at the time the invention was made to change the shape of the inclined walls to also be longitudinally inclined. The motivation to do so would be that Kanaya et al teaches the fins to have a curved profile and a section with variable size (Figs 2,4,5,7 and 8) and that it would increase the flow of cooling air and reduce whizzing sounds and noise (abstract).

12. Regarding claim 12 Kanaya et al teaches:

The alternator according to Claim 11, wherein the angle is less than 30° (Figs 2 and 4 and 5).

13. Regarding claim 13 Kanaya et al teaches:

The alternator according to Claim 11, wherein the radial port comprises at least one radial fin which, considered in cross-section in a plane perpendicular to the longitudinal axis, is inclined with respect to the radial direction (Fig 2).

14. Regarding claim 14 Kanaya et al teaches:

The alternator according to Claim 11, wherein at least one axial port is made on an axial face of the outer shell, overall of orientation perpendicular to the longitudinal axis, and is delimited on a radially inner side by a substantially circular inner edge, at least one fin, referred to as an axial fin, of said port, considered in a plane perpendicular to the longitudinal axis, extending in a general direction forming an angle less than 90° with

respect to the tangent to the inner edge so that said axial fin, considered in cross-section in a plane perpendicular to the longitudinal axis, is inclined with respect to the radial direction (Figs 2 and 4 and 5).

15. Regarding claim 15 Kanaya et al teaches:

The alternator according to Claim 14, wherein the angle is greater than 60° (Figs 2 and 4 and 5).

16. Regarding claim 16 Kanaya et al teaches:

The alternator according to Claim 14, wherein the radial port comprises at least one radial fin which, considered in cross-section in a plane perpendicular to the longitudinal axis, is inclined with respect to the radial direction, and in that the axial fin, considered in cross-section in a plane perpendicular to the longitudinal axis, is inclined with respect to the radial direction in the same sense as the radial fin (Figs 2 and 4 and 5).

17. Regarding claim 17 Kanaya et al teaches:

The alternator according to Claim 11, wherein the radial fins have, perpendicular to their profile, a section of constant size.

18. Regarding claim 18 Kanaya et al teaches:

The alternator according to Claim 11, wherein the radial fins have, perpendicular to their profile, a section of variable size along this profile.

19. Regarding claim 19 Kanaya et al teaches:

The alternator according to Claim 18, wherein the fins have a curved profile.

Regarding claims 17-19 above, Kanaya et al discloses the claimed invention except for the shape or size of the radial fins to be of a of a particular shape. It would have been an obvious matter of design choice to make radial fins of different shapes and sizes, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose, 105 USPQ 237 (CCPA 1955).* Kanaya et al also teaches the fins to have a curved profile and a section with variable size (Figs 2,4,5,7 and 8). The motivation to change the shape of the fins would be based on the parameters of space availability, location of the fins with respect to the stator, housing as well as size/ and shape of the stator to determine the location and shape and size of the fins. The motivation would also be that it would increase the flow of cooling air and reduce whizzing sounds and noise (abstract).

20. Regarding claim 20 Kanaya et al teaches:

The alternator according to Claim 11, wherein at least one of the fins of at least one of the axial and radial ports has an edge turned towards the fan inclined so that the edges of the blades of the fan turned towards said port progressively sweep across said edge of the fin while turning about the rotary shaft (Figs 2 and 4 and 5).

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

22. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAISHADH N. DESAI whose telephone number is (571)270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dang D Le/
Primary Examiner, Art Unit 2834

Naishadh N Desai

Patent Examiner